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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,841	07/07/2008	Mitsuaki Kageyama	46884-5481	7580
55694 7590 09/30/2010 DRINKER BIDDLE & REATH (DC) 1500 K STREET, N.W. SUITE 1100 WASHINGTON, DC 20005-1209				
EXAMINER NUR, ABDULLAH				
ART UNIT 2886		PAPER NUMBER		
NOTIFICATION DATE 09/30/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DBRIPDocket@dbi.com  
penelope.mongelluzzo@dbi.com

### Office Action Summary

**Application No.**

10/580,841

**Applicant(s)**

KAGEYAMA ET AL.

**Examiner**

ABDULLAHI NUR

**Art Unit**

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**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on communication filed o 6/28/2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB06)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Paper No(s)/Mail Date \_\_\_\_\_
- 6) ☐ Other: \_\_\_\_\_
- 7) ☐ Notes of Informal Patent Application

## **DETAILED ACTION**

### **Priority**

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### **Preliminary Amendment**

Receipt is acknowledged of the preliminary amendment filed on 5/26/2006. The amendment has been placed of record in the file.

### **The Information Disclosure Statements**

The prior art cited in the information disclosure statements filed on 6/28/2010, 11/5/2009 and 5/26/2006 has been considered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhara et al. (US Patent # 5,542,018) [hereinafter Kuhara] in view of Jung et al. (US 2003/0197855 A1) [hereinafter Jung].**

As to claim 1, Kuhara teaches a photodetector comprising: a substrate (11, Fig.3); a photodetecting element, having a photodetecting (column 5, lines 31-32) element formed on the substrate; a light entrance portion, being used to make light, to be detected by the photodetecting elements, enter and including an opening formed in the substrate in a predetermined positional relationship with respect to the photodetecting element (Fig.2; column 5, lines 43-47); and a carrier capturing portion, being disposed between the photodetecting element and the light entrance portion, capturing carriers generated when light is illuminated onto a substrate portion near the light entrance portion, and removing the carriers to the exterior (column 5, lines 34-36; column 10, lines 6-8).

Kuhara is silent to the photodetecting element being a photodetecting array.

Jung teaches an apparatus and method for measuring optical characteristics of an object utilizing a photodiode array sensor to measure broadband visible and infrared light (paragraph 0231).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a photodetecting array sensor to the invention of Kuhara in order to measure broadband light at various wavelengths.

As to claim 2, Kuhara in view of Jung teaches all as applied to claim 1, and in addition Kuhara teaches wherein the substrate has a first conductive type substrate and a second conductive type epitaxial layer, formed on the first conductive type substrate, and has channel regions, functioning as the photodetecting elements, formed in the epitaxial layer (17, 19, Fig.11; column 6, lines 1-13; column 5, lines 55-57).

As to claim 3, Kuhara in view of Jung teaches all as applied to claim 1, and in addition Kuhara teaches wherein the substrate has a first conductive type substrate and a second conductive type well region, formed in the first conductive type substrate, and has channel regions, functioning as the photodetecting elements, formed in the well region (17, 19, Fig.11; column 6, lines 1-13; column 5, lines 55-57) , and the carrier capturing portion is arranged from a region portion of the second conductive type well region that is located between the photodetecting element array and the light entrance portion (column 5, lines 34-36; column 10, lines 6-8).

As to claim 4, Kuhara in view of Jung teaches all as applied to claim 1, and in addition Kuhara teaches wherein the substrate has a first conductive type substrate, has channel regions, functioning as the photodetecting elements, formed in the first conductive type substrate (17, 19, Fig.11; column 6, lines 1-13; column 5, lines 55-57) , and has a dummy channel region in a substrate portion of the first conductive type substrate that is located between the photodetecting element array and the light entrance portion, and the carrier capturing portion is arranged from the dummy channel region (column 5, lines 55-62; and note that

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said photodetecting element has a region whereby the signals generated in the region do not follow to the detector).

As to claim 5, Kuhara in view of Jung teaches all as applied to claim 1, and in addition Kuhara teaches wherein an electrode for removing the captured carriers to the exterior is connected to the carrier capturing portion (column 7, lines 2-4).

As to claim 6, Kuhara in view of Jung teaches all as applied to claim 1. Kuhara in view of Jung is silent to the dispersive element positioned with respect to the photodetector at a predetermined position along an optical path from the light entrance portion to the photodetecting element array. Examiner takes Official Notice of the fact that use of dispersive element is well known in the art of optics to separate light into its respective wavelengths, thereby enhancing resolution.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a dispersive element to the invention of Kuhara in view of Jung in order to separate light into its respective wavelengths, thereby enhancing resolution.

### **Conclusion**

Several facts have been relied upon from the personal knowledge of the examiner about which the examiner took Official Notice. Applicant must seasonably challenge well known statements and statements based on personal knowledge when they are made by the Board of Patent Appeals and Interferences. In re Selmi, 156 F.2d 96, 70 USPQ 197 (CCPA 1946); In re

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Fischer, 125 F.2d 725, 52 USPQ 473 (CCPA 1942). See also In re Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice). If applicant does not seasonably traverse the well-known statement during examination, then the object of the well known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the next reply after the Office action in which the well known statement was made."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdullahi Nur whose telephone number is **571 270 1298**. The examiner can normally be reached on Monday through Friday, 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur Chowdhury, can be reached on **571 272 2287**. The fax phone number for the organization where this application or proceeding is assigned is **571 273 8300**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A.N./

Abdullahi Nur

Patent Examiner,

Art Unit 2886

/TARIFUR R CHOWDHURY/

Supervisory Patent Examiner, Art Unit 2886



